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EXAMINER	
THOMPSON, JAMES A	
ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/851,918	BERCHTOLD ET AL.	
	Examiner	Art Unit	
	James A. Thompson	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2005 and 03 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/14/05,06/03/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 8, lines 7-12, filed 14 March 2005, with respect to the information disclosure statement have been fully considered and are persuasive. Signed and initialed copies of the updated Information Disclosure Statements, filed 14 March 2005 and 03 June 2005, have been included with the present office action. The objections to the Information Disclosure Statement listed in item 1 of the previous office action, dated 03 December 2004, have been withdrawn.

2. Applicant's arguments, see page 8, lines 13-15, filed 14 March 2005, with respect to the objections to the claims have been fully considered and are persuasive. The objections to the claims listed in item 2 of said previous office action have been withdrawn.

3. Applicant's arguments filed 14 March 2005 have been fully considered but they are not persuasive. Applicant's arguments are based on the amendments to the claims, and not the claims as filed immediately prior to said previous office action. The rejections of the claims based on prior art are given in detail below. The new grounds of rejection have been necessitated by the present amendments to the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-2 and 6 are rejected under 35 U.S.C. 102(a) as being anticipated by Jansen (US Patent 6,108,436).

Regarding claim 1: Jansen discloses detecting, during a printing process (column 3, lines 29-38 of Jansen), a position of a reference object (figure 5a(21) and column 3, lines 61-63 of Jansen) on the printing medium (figure 3(8) and column 4, lines 18-20 of Jansen), the reference object being arranged ahead of the at least one measurement object (figure 5a(24) of Jansen) relative to a travel direction of the printing medium (column 3, lines 61-63 of Jansen); and scanning, during the printing process (column 3, lines 29-38 of Jansen), the at least one measurement object with at least one sensor (figure 3 and column 6, lines 54-60 of Jansen) based on a relative position of the measurement object with respect to the detected position of the reference object (column 4, lines 32-35 of Jansen), said at least one sensor detecting information from the at least one measurement object indicating at least one of optical density and color or spectral values of the at least one measurement object (column 4, lines 10-17 of Jansen). Spectral values are determined by the sensor since the specific color, including support colors (column 3, lines 56-57 of Jansen), of each measurement object is determined to ensure that the appropriate color is at the appropriate position (column 4, lines 10-17 of Jansen). The spectral value measured is specifically the

portion of the visible light spectrum represented by the measurement object.

Regarding claim 2: Jansen discloses that said step of scanning includes moving the at least one sensor in a translational movement transverse to the travel direction of the printing medium to scan the at least one measurement object (figure 5b and column 4, lines 6-8 and lines 32-35 of Jansen), the movement of the at least one sensor being activated responsive to a detection of the reference object (column 3, lines 61-63 and column 4, lines 11-17 of Jansen), said at least one sensor detecting information from the at least one measurement object indicating at least one of optical density and/or color or spectral values of the at least one measurement object (column 4, lines 10-17 of Jansen). The red reference mark (figure 5a(21) of Jansen) is first detected and measured (column 4, lines 32-35 of Jansen) and used to determine the locations of the other marks (column 3, lines 61-63 of Jansen), which are measured in response to the detection of said red reference mark (column 4, lines 11-17 of Jansen). Since the other reference marks are separated by specific distances in a direction transverse to the travel direction of the printing medium (figure 5b and column 4, lines 6-8 of Jansen), a translational movement transverse to the travel direction of the printing medium of said sensor means is inherent since measurement would otherwise not be possible.

Regarding claim 6: Jansen discloses a scanning apparatus (figure 3 of Jansen) comprising a sensor device (figure 4 and column 2, lines 55-61 of Jansen) including a plurality of measurement heads arranged in a printing machine (figure 3(14); column 4, lines 36-38; and column 7, lines 14-16 of Jansen), a

printing medium (figure 3(8) of Jansen) having a reference object (figure 5a(21) and column 3, lines 61-63 of Jansen) arranged thereon at a predetermined distance running in a printing medium transport direction ahead of said at least one measurement object (column 4, lines 6-11 of Jansen), wherein said at least one measurement object is a longitudinal measurement strip disposed along a coordinate direction approximately transversely of the printing medium transport direction (figure 5a(21) and column 3, lines 48-50 of Jansen), at least one of said measurement heads being operative to detect said reference object (column 4, lines 32-35 of Jansen) during a printing process (column 3, lines 29-38 of Jansen), remainder ones of said measurement heads being activatable to detect and scan said at least one measurement object (column 3, lines 61-63 and column 4, lines 11-17 of Jansen) during the printing process (column 3, lines 29-38 of Jansen), said remainder ones of measurement heads being activated responsive to said reference object detection (column 4, lines 11-17 of Jansen) and being arranged and dimensioned for detecting information from the at least one measurement object indicating at least one of optical density and color or spectral values of said at least one measurement object (column 4, lines 10-17 of Jansen). The red reference mark (figure 5a(21) of Jansen) is first detected and measured (column 4, lines 32-35 of Jansen) and used to determine the locations of the other marks (column 3, lines 61-63 of Jansen), which are measured in response to the detection of said red reference mark (column 4, lines 11-17 of Jansen). Separate measurement heads can be used for each color (column 7, lines 14-16 of Jansen). Spectral values are determined by the sensor since the specific color, including support colors (column 3,

lines 56-57 of Jansen), of each measurement object is determined to ensure that the appropriate color is at the appropriate position (column 4, lines 10-17 of Jansen). The spectral value measured is specifically the portion of the visible light spectrum represented by the measurement object.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3-4 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jansen (US Patent 6,108,436) in view of Hern (US Patent 5,546,859).

Regarding claim 3: Jansen discloses that the printing medium is carried on a roll (figure 1(7) and column 3, lines 15-22 of Jansen).

Jansen does not disclose expressly measuring and storing, at an instant of detection of the reference object, a corresponding angle φ of rotation of the roll.

Hern discloses measuring and storing, at an instant of detection of a reference object (column 4, lines 54-59 of Hern), a corresponding angle φ of rotation of the roll (column 6, lines 6-16 of Hern).

Jansen and Hern are combinable because they are from the same field of endeavor, namely image processing for printing presses. At the time of the invention, it would have been

obvious to a person of ordinary skill in the art to determine and store an angular position of the roller when the reference object is detected, as taught by Hern. The motivation for doing so would have been to track the location of regions (column 6, lines 13-16 of Hern), such as the initial reference marks (figure 5a(21) of Jansen) upon which location the locations of the reference marks are based (column 4, lines 6-11 of Jansen). Therefore, it would have been obvious to combine Hern with Jansen to obtain the invention as specified in claim 3.

Regarding claim 4: Jansen discloses that the measurement object is scanned when the roll has rotated a specific increment (column 4, lines 11-17 of Jansen).

Jansen does not disclose expressly calculating an angle-of-rotation increment based on a diameter of said roll, the measured angle φ of rotation, and a predetermined distance running in a printing medium transport direction between the reference object and the measurement object, said step of scanning being performed when said roll has rotated said angle increment.

Hern discloses calculating an angle-of-rotation increment based on a diameter of said roll (column 5, lines 50-57 of Hern), the measured angle φ of rotation (column 5, lines 50-54 and column 6, lines 6-13 of Hern), and a predetermined distance (d_2) running in a printing medium transport direction between the reference object and the measurement object (column 5, lines 50-54 of Hern), the measurement object being marked when said roll has rotated said angle increment (column 6, lines 9-13 of Hern).

Jansen and Hern are combinable because they are from the same field of endeavor, namely image processing for printing presses. At the time of the invention, it would have been

obvious to a person of ordinary skill in the art to calculate an angle-of-rotation increment, as taught by Hern, and perform an image processing operation when the roll has rotated said angle increment, as also taught by Hern, said image processing operation being scanning at a specified increment, as taught by Jansen. The motivation for doing so would have been to track the location of regions (column 6, lines 13-16 of Hern), such as the initial reference marks (figure 5a(21) of Jansen) upon which location the locations of the reference marks are based (column 4, lines 6-11 of Jansen). Therefore, it would have been obvious to combine Hern with Jansen to obtain the invention as specified in claim 4.

Regarding claim 22: Jansen discloses that the printing medium is carried on a roll (figure 1(7) and column 3, lines 15-22 of Jansen).

Jansen does not disclose expressly an angle measurement transmitter carried on said printing roll for detecting an angle of rotation of said printing roll, said transmitter being electrically operatively connected to the apparatus.

Hern discloses an angle measurement transmitter carried on said printing roll (figure 2(13) and column 5, lines 20-24 of Hern) for detecting an angle of rotation of said printing roll (column 6, lines 6-13 of Hern), said transmitter being electrically operatively connected to the apparatus (column 5, lines 21-24 of Hern).

Jansen and Hern are combinable because they are from the same field of endeavor, namely image processing for printing presses. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the angle measurement transmitter taught by Hern to determine an

angular position of the roller. The motivation for doing so would have been to track the location of regions (column 6, lines 13-16 of Hern), such as the initial reference marks (figure 5a(21) of Jansen) upon which location the locations of the reference marks are based (column 4, lines 6-11 of Jansen). Therefore, it would have been obvious to combine Hern with Jansen to obtain the invention as specified in claim 22.

Regarding claim 23: Jansen discloses a control electronics unit (figure 4(37) and column 4, lines 40-44 of Jansen), said control electronics unit being operative to scan the measurement object when the roll has rotated a specific increment (column 4, lines 11-17 of Jansen).

Jansen does not disclose expressly that said control electronics unit detects a current angle of rotation of said printing roll at detection of said reference object and trigger activation of apparatus scanning when a predicted angle-of-rotation increment relative to that at detection is reached.

Hern discloses detecting a current angle of rotation of said printing roll at detection of said reference object (gap) (column 6, lines 6-13 of Hern) and trigger activation of apparatus marking when a predicted angle-of-rotation increment relative to that at detection is reached (column 6, lines 9-13 of Hern).

Jansen and Hern are combinable because they are from the same field of endeavor, namely image processing for printing presses. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to calculate an angle-of-rotation increment, as taught by Hern, and perform an image processing operation when the roll has rotated said angle increment, as also taught by Hern, said image processing

operation being scanning at a specified increment, as taught by Jansen. The motivation for doing so would have been to track the location of regions (column 6, lines 13-16 of Hern), such as the initial reference marks (figure 5a(21) of Jansen) upon which location the locations of the reference marks are based (column 4, lines 6-11 of Jansen). Therefore, it would have been obvious to combine Hern with Jansen to obtain the invention as specified in claim 23.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jansen (US Patent 6,108,436) in view of Magde (US Patent 5,363,174).

Regarding claim 5: Jansen discloses that scanning is triggered in accordance with a predetermined distance running in a printing medium transport direction between the reference object and the measurement object (column 4, lines 11-17 of Jansen). A printing press moves at a particular speed and, as is well-known, $\text{time} = \frac{\text{distance}}{\text{speed}}$. Therefore, it is inherent that said scanning is activated with a time delay relative to an instant of detection of the reference object, since a delay based on a predetermined distance is the same as a delay based on a predetermined time in the case of a constant speed printing press.

Jansen does not disclose expressly that said scanning is activated with a time delay, and is triggered in accordance with a currently determined printing medium speed and a predetermined distance.

Magde discloses triggering a scanning operation with a time delay in accordance with a currently determined printing medium

speed and a predetermined distance (column 9, lines 17-21 of Magde). Again, since $\text{time} = \frac{\text{distance}}{\text{speed}}$, the currently determined speed is inherent since the time delay required for a particular distance could not be known otherwise.

Jansen and Magde are combinable because they are from the same field of endeavor, namely image processing and correction for printing machines. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to base the scanning operations taught by Jansen on a currently determined print speed and a predetermined distance, as taught by Magde. The suggestion for doing so would have been a time interval can correlate to an equivalent distance interval (column 9, lines 17-21 of Magde). Therefore, it would have been obvious to combine Magde with Jansen to obtain the invention as specified in claim 5.

9. Claims 8-9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jansen (US Patent 6,108,436) in view of Mamizuka (US Patent 6,061,144).

Regarding claim 8: Jansen does not disclose expressly that the measurement strip includes a linearly arranged chain of measurement fields thereon, said measurement fields having specific color density values.

Mamizuka discloses that said measurement strip includes a linearly arranged chain of measurement fields thereon (column 10, lines 4-6 of Mamizuka), said measurement fields having specific color density values (column 10, lines 6-13 of Mamizuka).

Jansen and Mamizuka are combinable because they are from the same field of endeavor, namely digital image processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a linearly arranged chain of measurement fields having specific color density values, as taught by Mamizuka, for the reference and measurement objects taught by Jansen. The motivation for doing so would have been to correct for a set of gradations corresponding to a desired gamma function (column 5, lines 13-22 of Mamizuka). Therefore, it would have been obvious to combine Mamizuka with Jansen to obtain the invention as specified in claim 8.

Regarding claim 9: Jansen discloses that, for detection and scanning purposes, each measurement head is associated with at least one measurement section (column 4, lines 18-20 and column 7, lines 14-16 of Jansen), which measurement section includes at least on of said measurement fields (figure 5a(22-26) and column 4, lines 11-17 of Jansen).

Regarding claim 16: Jansen discloses that the reference object comprises at least one of said measurement fields (figure 5a(21) and column 3, lines 61-63 of Jansen).

10. Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jansen (US Patent 6,108,436) in view of Mamizuka (US Patent 6,061,144) and Sasanuma (US Patent 5,856,876).

Further regarding claim 10: Mamizuka discloses that each measurement section comprises two adjacent measurement zones (figure 4(46(Bk)) of Mamizuka). The set of four light patches and the set of four dark patches for any of the colors shown in

figure 4 of Mamizuka can be considered two separate measurement zones.

Jansen in view of Mamizuka does not disclose expressly that said measurement zones are spaced apart and intervened by a narrow track.

Sasanuma discloses separating measurement zones with a narrow track (column 10, lines 1-5 of Sasanuma), as can clearly be seen in figure 5 of Sasanuma.

Jansen in view of Mamizuka is combinable with Sasanuma because they are from the same field of endeavor, namely digital image processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to space apart two sets of the density patches taught by Mamizuka with a narrow track, as taught by Sasanuma, thus creating two adjacent measurement zones. The motivation for doing so would have been that overlapping would adversely affect the results when the correction test patterns are read (column 10, lines 1-5 of Sasanuma) and a narrow track between measurement zones would clearly help mitigate this problem. Therefore, it would have been obvious to combine Sasanuma with Jansen in view of Mamizuka to obtain the invention as specified in claim 10.

Regarding claim 11: Jansen discloses that the measurement zones have identically recurring sequences of color density values (column 3, lines 48-50 of Jansen).

Regarding claims 12 and 13: Jansen discloses that each measurement zone has measurement fields of a same longitudinal dimension (column 4, lines 9-11 of Jansen). Each measurement field (figure 5a(22-26) of Jansen) is 0.2x0.2 mm (column 4, lines 9-11 of Jansen).

Further regarding claim 14: As discussed above in the arguments regarding claim 10, the set of four light patches and the set of four dark patches for any of the colors shown in figure 4 of Mamizuka can be considered two separate measurement zones. Therefore, each measurement zone includes a common number of measurement fields.

Further regarding claim 15: Mamizuka discloses that each measurement zone has at least one minimum and one maximum color density value (column 10, lines 10-13 of Mamizuka).

11. Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jansen (US Patent 6,108,436) in view of Mamizuka (US Patent 6,061,144) and Toyofuku (US Patent 5,289,000).

Regarding claim 17: Jansen discloses that a separate measurement head is used for each color (column 7, lines 14-16 of Jansen).

Jansen does not disclose expressly that said measurement heads are arranged one after another along said coordinate direction, the measurement heads being movable along said coordinate direction.

Mamizuka discloses that measurement fields are arranged one after another along said coordinate direction (figure 4 and column 10, lines 6-12 of Mamizuka).

Jansen and Mamizuka are combinable because they are from the same field of endeavor, namely digital image processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use arrange the measurement fields as taught by Mamizuka, thus requiring that the measurement heads taught by Jansen are arranged one after

another along said coordinate direction in order to read said measurement fields. The motivation for doing so would have been that such an arrangement of measurement fields allows for the correction of a set of gradations corresponding to a desired gamma function (column 5, lines 13-22 of Mamizuka). Therefore, it would have been obvious to combine Mamizuka with Jansen.

Jansen in view of Mamizuka does not disclose expressly that the measurement heads being movable along said coordinate direction.

Toyofuku discloses moving a measurement head (figure 2(35) of Toyofuku) along a particular coordinate direction (column 7, line 68 to column 8, line 8 of Toyofuku).

Jansen in view of Mamizuka is combinable with Toyofuku because they are from the same field of endeavor, namely digital image processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to move the measurement heads in a predetermined direction, as taught by Toyofuku, said predetermined direction being the coordinate direction of the measurement fields taught by Mamizuka. The motivation for doing so would have been to move the measurement heads to a position in which said measurement heads can properly read the image data (column 7, lines 59-63 and column 8, lines 4-8 of Toyofuku). Therefore, it would have been obvious to combine Toyofuku with Jansen in view of Mamizuka to obtain the invention as specified in claim 17.

Regarding claim 18: Jansen discloses that the apparatus is disposed above a printing machine roll (figure 3 of Jansen), the printing medium being carried on said roll (figure 1(7) and column 3, lines 15-22 of Jansen). As can clearly be seen in figure 3 of Jansen, the apparatus is disposed above the printing

machine paper (figure 3(8) of Jansen), taken from the printing machine roll (figure 1(7) of Jansen). Further, as can clearly be seen in figure 2 of Jansen, the apparatus (figure 2(12a-12d) of Jansen) is disposed above the printing machine rollers (figure 2(6a-6d) of Jansen) which are disposed above the printing machine roll (figure 1(7) of Jansen).

Further regarding claims 19 and 20: Toyofuku discloses a slide device (figure 2(90) of Toyofuku), said measurement heads being carried on said slide device (column 8, lines 24-28 of Toyofuku), said slide device being movable translationally along a particular coordinate direction (column 7, line 68 to column 8, line 5 of Toyofuku). As discussed in the arguments regarding claim 17, upon which claims 19 and 20 are dependent, the combination of Toyofuku with Jansen in view of Mamizuka provides that said predetermined direction of Toyofuku is the coordinate direction of the measurement fields taught by Mamizuka.

Regarding claim 21: Jansen discloses that a separate measurement head is used for each color (column 7, lines 14-16 of Jansen) and each measurement head scans a measurement section associated with said each measurement head (column 4, lines 11-17 of Jansen).

Jansen does not disclose expressly that the associated measurement section scanned by each measurement head is a measurement section of said measurement strip, and is scanned in progressive time with slide device translational movement.

Mamizuka discloses that each measurement section is a measurement section of a measurement strip (figure 4(46(Bk)) and column 10, lines 16-21 of Mamizuka).

Jansen and Mamizuka are combinable because they are from the same field of endeavor, namely digital image processing. At

the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the measurement strips taught by Mamizuka for organizing the measurement objects taught by Jansen. The motivation for doing so would have been to correct for a set of gradations corresponding to a desired gamma function (column 5, lines 13-22 of Mamizuka). Therefore, it would have been obvious to combine Mamizuka with Jansen.

Jansen in view of Mamizuka does not disclose expressly that said scanning is performed in progressive time with slide device translational movement.

Toyofuku discloses scanning in progressive time with slide device translational movement (column 8, lines 4-8 of Toyofuku).

Jansen in view of Mamizuka is combinable with Toyofuku because they are from the same field of endeavor, namely digital image processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to progressively scan as taught by Toyofuku. The motivation for doing so would have been to keep an equal light path length to the CCD (column 8, lines 6-8 of Toyofuku) and thus obtain a proper reading with the CCD. Therefore, it would have been obvious to combine Toyofuku with Jansen in view of Mamizuka to obtain the invention as specified in claim 21.

12. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jansen (US Patent 6,108,436) in view of Hern (US Patent 5,546,859) and Magde (US Patent 5,363,174).

Regarding claim 24: Jansen discloses a control electronics unit (figure 4(37) and column 4, lines 40-44 of Jansen), said control electronics unit triggering activation of said scanning apparatus with a predetermined distance between the reference

object (figure 5a(21) of Jansen) and the measurement object (figure 5a(22) of Jansen) (column 4, lines 11-17 of Jansen). A printing press moves at a particular speed and, as is well-known, $\text{time} = \frac{\text{distance}}{\text{speed}}$. Therefore, it is inherent that said scanning is activated with a time delay relative to an instant of detection of the reference object, since a delay based on a predetermined distance is the same as a delay based on a predetermined time in the case of a constant speed printing press.

Jansen in view of Hern does not disclose expressly that said scanning apparatus is activated with a predicted time delay, said time delay being functionally dependent on a predetermined distance between the reference object and the measurement object.

Magde discloses triggering a scanning operation with a predicted time delay, said time delay being functionally dependent on a predetermined distance (column 9, lines 17-21 of Magde).

Jansen and Magde are combinable because they are from the same field of endeavor, namely image processing and correction for printing machines. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to base the scanning operations taught by Jansen on a currently predicted time delay, as taught by Magde. The suggestion for doing so would have been a time interval can correlate to an equivalent distance interval (column 9, lines 17-21 of Magde). Therefore, it would have been obvious to combine Magde with Jansen to obtain the invention as specified in claim 24.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Art Unit 2624

JAT
12 July 2005

Thomas D. Lee
TOMMY LEE
PRIMARY EXAMINER